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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,577	09/10/2003	Lawrence T. Drzal	MSU 4.1-588	4666
21036	7590	12/14/2007		
MCLEOD & MOYNE, P.C. 2190 COMMONS PARKWAY OKEMOS, MI 48864			EXAMINER NILAND, PATRICK DENNIS	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 12/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/659,577

Applicant(s)

DRZAL ET AL.

Examiner

Patrick D. Niland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7,8,10-15,19,20,22,23 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) 4,7,8,10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,12-15,19,20,22,23 and 25-33 is/are rejected.
- 7) ☒ Claim(s) 4,7,8,10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/5/07 has been entered.

The amendment of 11/5/07 has been entered. Claims 1-4, 7-8, 10-15, 19-20, 22-23, and 25-33 are pending.

2. Claims 4, 7, 8, 10, 11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4, 7, 8, 10, 11 have not been further treated on the merits.

3. The amendment filed 5/10/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The recitation added to the abstract of "up to five minutes so that there is not significant order between the nanoplatelets compared to a precursor graphite" does not find support for the entirety of the newly recited range, i.e. the full scope of "up to five minutes", in the originally filed specification nor for "so that there is not significant order between the nanoplatelets compared to a precursor graphite", even at the sections cited by the applicant. This rejection is maintained for the reasons stated above and the applicant has not distinctly pointed out how the rejection is incorrect nor where to find support

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for the range discussed above. 3-5 minutes is noted in the originally filed specification but "up to five minutes" is not seen the newly added scope is new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

4. Claims 1-3,12-15,19,20,22,23 and 25-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A. The applicant points to figure 4 for basis for the new recitation of "1040 Watts" of claims 29-32. The figure only shows 1040W at 3 minutes for one specific graphite expansion mixture/process situation. This does not establish using 1040W for all graphitization expansion mixtures and/or process situations, particularly regarding the time the power is applied, encompassed by the newly presented claims. The recited power is therefore new matter as it relates to the entire scope of the instant claims. This rejection is maintained for the reasons stated above and the applicant has not distinctly pointed out how the rejection is incorrect nor where to find support for the range discussed above.

B. There is not basis in the originally filed specification for the newly recited "heating for a time up to 5 minutes" of claims 1-3, 12-15, 19-20, 22-23, and 25-33 because the full range, i.e. >0-5 minutes, encompassed by this range is not disclosed in the application as originally filed, even at the sections cited by the applicant. 3-5 minutes is noted in the originally filed specification but "up to five minutes" is not seen the newly added scope is new matter. This

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rejection is maintained for the reasons stated above and the applicant has not distinctly pointed out how the rejection is incorrect nor where to find support for the range discussed above.

5. The claim recitation of "worm-like" has been considered regarding 112 second paragraph issues. It is a term of art that the ordinary skilled artisan would understand, based on the examiner's search of the prior art. US Pat. Nos. 6395199 and 4199628, column 6, line 24 recite this term and describe it regarding the expanded graphite art. The recitation of "worm like" at section [0069] of the applicant's specification is noted. See MPEP 2173.05(b): regarding

"The term "or like material" in the context of the limitation "coke, brick, or like material"

was held to render the claim indefinite since it was not clear how the materials other than coke or brick had to resemble the two specified materials to satisfy the limitations of the claim. Ex parte Caldwell, 1906 C.D. 58 (Comm'r Pat. 1906)." However, the term is well defined in this instance and the ordinary skilled artisan would know what "worm-like" means regarding the expanded graphite art.

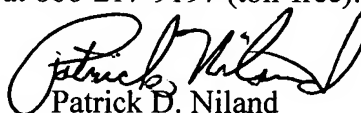
6. The prior art considered does not teach nor suggest the instantly claimed limitations in a manner consistent with *Graham v. Deere*.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Patrick D. Niland", is written over the printed name.

Patrick D. Niland
Primary Examiner
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